

What is claimed is:

- 1 1. An optical projection system comprising:
 - 2 a. a plurality of light sources producing a plurality of images;
 - 3 b. means for superimposing at least two of the images. and
 - 4 c. means for tiling at least two of the images.
- 1 2. An optical projection system according to claim 1 in which the tiling means
 - 2 comprises means for providing enhanced blending in overlapped regions of the tiled images.
- 1 3. An optical projection system according to claim 2 in which the tiling means
 - 2 comprises a pyramid prism.
- 1 4. An optical projection system according to claim 3 in which the pyramid prism
 - 2 comprises a plurality of sides and an apex, the plurality of sides functioning to combine
 - 3 images and the apex functioning to decrease intensity of illumination to provide the enhanced
 - 4 blending in the overlapped regions.
- 1 5. An optical projection system according to claim 4 further comprising a
 - 2 projection lens for projecting superimposed, tiled images.
- 1 6. An optical projection system according to claim 1 in which each of the
 - 2 plurality of light sources comprises a DMD.
- 1 7. An optical projection system according to claim 5 in which the projection lens
 - 2 defines an optical axis and in which position of the pyramid prism relative to the optical axis
 - 3 can vary.
- 1 8. An optical projection system according to claim 2 further comprising at least
 - 2 one polarizing beam splitter interposed optically between at least one light source and the
 - 3 pyramid prism
- 1 9. An optical projection system according to claim 8 in which the polarizing
 - 2 beam splitter has a reflective and a transmissive face and is interposed optically between the

3 pyramid prism and two light sources, images from one of the two light sources being directed
4 to the reflective face and images from the other of the two light sources being directed to the
5 transmissive face.

1 10. An optical projection system according to claim 1 further comprising a pre-
2 modulator.

1 11. An optical projection system according to claim 5 further comprising an edge
2 mask interposed optically between the pyramid prism and the projection lens.

1 12. An optical projection system according to claim 8 further comprising a
2 combining polarizing beam splitter and an additional polarizing beam splitter interposed
3 optically between at least one light source and the combining polarizing beam splitter.

1 13. An optical projection system according to claim 9 further comprising a system
2 of relay lenses that act to permit adjustment of the magnification of the images from each of
3 the light sources.

1 14. An optical projection system according to claim 1 in which the tiling means
2 comprises a plurality of mirrors, further comprising a plurality of projection lenses associated
3 therewith.

1 15. A method of projecting a plurality of images, the method comprising:
2 a. creating the plurality of images;
3 b. superimposing at least two of the images, and
4 c. tiling at least two of the images.

1 16. An optical system comprising:
2 a. a light source;
3 b. a relay lens;
4 c. a prism interposed optically between the light source and the relay
5 lens, and
6 d. an edge mask positioned optically after the relay lens.

1 17 An optical system according to claim 16 in which the relay lens locates an
2 image at a particular location and in which the edge mask is positioned at the plane of the
3 image.

1 18 An optical system according to claim 17 further comprising a shading mask
2 interposed optically between the relay lens and the image location.

1 19. An optical system according to claim 5 further comprising a second plurality
2 of light sources producing a second plurality of images and a second projection lens for
3 projecting the second plurality of images or images derived therefrom.

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